Docket No.: 61355-046 **PATENT**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	Customer Number: 20277
Shunsuke HIJIKATA	Confirmation Number: 9940
Serial No.: 10/656,173	Group Art Unit: 3663
Filed: September 08, 2003	Examiner: T. C. To

For: DRIVING ASSIST SYSTEM FOR VEHICLE

CERTIFICATE OF MAILING UNDER 37 CFR 1.8

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on January 12, 2006.

Cathi L.G. Thoorsell

Cathi L.G. Thoorsell

REQUEST FOR REFUND

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

A refund in the amount of $200.00 is hereby requested in the above-identified application for the following reason:

An amendment filed on October 11, 2005, in response to the Office Action dated July 11, 2005, an inadvertent overpayment at the amount of $200.00 was made. The application includes four independent claims (Claims 1 and 16-18), not five as previously indicated.

Please credit Deposit Account number 500417 in the amount of $200.00.

Respectfully submitted,

MCDERMOTT WILL & EMERY LLP

Wei-Chen Chen.

Wei-Chen Nicholas Chen
Registration No. 56,665

600 13th Street, N.W.
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Date: January 12, 2006

F-C

Docket No.: 61355-046

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Shunsuke HIJIKATA

Serial No.: 10/656,173

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Examiner: T. C. To

For: DRIVING ASSIST SYSTEM FOR VEHICLE

TRANSMITTAL

Dear Sir:

Transmitted herewith is a Supplemental Amendment in the above-identified application.

☐ No additional fee is required.

☐ Applicant is entitled to small entity status under 37 CFR 1.27

☒ Also attached: Request for Refund; and return postcard

The fee has been calculated as shown below:

	NO. OF CLAIMS	HIGHEST PREVIOUSLY PAID FOR	EXTRA CLAIMS	RATE	FEE
Total Claims	18	-20	0	$18.00 =	$0.00
Independent Claims	4	-3	1	$84.00 =	$84.00
		Multiple claims newly presented			$0.00
		Basic Fee			$750.00
		Total of initial filing fee calculation			$834.00
Independent Claims after Amendment October 11, 200		4	1	$200.00	$200.00
		Total of Above Calculations			$1,034.00
Request for Refund after Supplemental Amendment filed January 12, 2006		5	-1		$-200.00
		Total of fees after refund requested:			$834.00
		Total requested refund:			<$200.00>

☒ Please refund my Deposit Account No. 500417 in the amount of $200.00, per the Request for Refund. An additional copy of this transmittal sheet is submitted herewith.

☒ The Commissioner is hereby authorized to charge payment of any fees associated with this

filing fees under 37 CFR 1.16 for presentation of extra claims and any patent application processing fees under 37 CFR 1.17.

Respectfully submitted,

MCDERMOTT WILL & EMERY LLP

Wei-Chen Chen.

Wei-Chen Nicholas Chen,
Registration No. 56,665

600 13th Street, N.W.
Washington, DC 20005-3096
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Please recognize our Customer No. 20277 as our correspondence address.

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Cathi L.G. Thoorsell

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SUPPLEMENTAL AMENDMENT

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

This Supplemental Amendment is provided to correct an inadvertent deletion of text in Claim 11 from the amendment filed on October 11, 2005, in response to the Office Action dated July 11, 2005. The replacement of the erroneous deleted text into the Amendment does not change the scope of the claim, but reverts the claim back to the original claim language.

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks begin on page 10 of this paper.

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (original): A driving assist system for a vehicle, comprising:

a traveling condition recognition device that detects a state of the vehicle and a traveling environment of the vehicle;

a risk potential calculation device that calculates a risk potential present around the vehicle based upon detection results obtained by the traveling condition recognition device;

a reaction force adjustment device that adjusts reaction force characteristics of a vehicle operating device based upon the risk potential calculated by the risk potential calculation device;

an external influence detection device that detects an external influence which will affect an operation of the vehicle operating device by a driver; and

a reaction force correction device that corrects the reaction force characteristics of the vehicle operating device adjusted by the reaction force adjustment device, based upon detection results obtained by the external influence detection device.

Claim 2 (original): A driving assist system for a vehicle according to claim 1, wherein:

the reaction force adjustment device adjusts at least one of reaction force characteristics of an accelerator pedal and reaction force characteristics of a steering device as the reaction force characteristics of the vehicle operating device.

Claim 3 (original): A driving assist system for a vehicle according to claim 1, wherein:

the reaction force adjustment device adjusts reaction force characteristics of an accelerator pedal as the reaction force characteristics of the vehicle operating device;

the external influence detection device detects a state of inclination of a lane on which the vehicle is traveling as the external influence; and

the reaction force correction device corrects the reaction force characteristics of the accelerator pedal in conformance to the state of inclination of the lane detected by the external influence detection device.

Claim 4 (original): A driving assist system for a vehicle according to claim 1, wherein:

the reaction force adjustment device adjusts reaction force characteristics of a steering device as the reaction force characteristics of the vehicle operating device;

the external influence detection device detects a curving direction of a lane on which the vehicle is currently traveling and a direction along which the risk potential is present as the external influence; and

the reaction force correction device corrects the reaction force characteristics of the steering device in conformance to the curving direction of the lane and the direction along which the risk potential is present relative to the vehicle detected by the external influence detection device.

Claim 5 (original): A driving assist system for a vehicle according to claim 3, wherein:

the reaction force adjustment device calculates a reaction force adjustment quantity for the accelerator pedal in correspondence to the risk potential and adjusts the reaction force characteristics of the accelerator pedal by incorporating the reaction force adjustment

quantity; and

the reaction force correction device makes a correction so as to reduce the reaction force adjustment quantity calculated by the reaction force adjustment device if the lane is an uphill lane and makes a correction so as to increase the reaction force adjustment quantity calculated by the reaction force adjustment device if the lane is a downhill lane.

Claim 6 (original): A driving assist system for a vehicle according to claim 4, wherein:

the reaction force adjustment device calculates a reaction force adjustment quantity for the steering device in correspondence to the risk potential and adjusts the reaction force characteristics of the steering device by incorporating the reaction force adjustment quantity; and

the reaction force correction device, (a) corrects the reaction force adjustment quantity calculated by the reaction force adjustment device if the curving direction and the direction along which the risk potential is present do not match and (b) leaves the reaction force adjustment quantity calculated by the reaction force adjustment device if the curving direction and the direction along which the risk potential is present match.

Claim 7 (original): A driving assist system for a vehicle according to claim 6, wherein:

the reaction force correction device; (a) incorporates the reaction force adjustment quantity along both a steering direction matching the curving direction and a steering direction opposite from the curving direction when the curving direction and the direction along which the risk potential is present match and (b) incorporates the reaction force adjustment quantity along the steering direction matching the curving direction and incorporates the corrected reaction

force adjustment quantity along the steering direction opposite from the curving direction when the curving direction and the direction along which the risk potential is present do not match.

Claim 8 (original): A driving assist system for a vehicle according to claim 6, wherein:

the reaction force correction device; (a) incorporates the reaction force adjustment quantity along both a steering direction matching the curving direction and a steering direction opposite from the curving direction when the curving direction and the direction along which the risk potential is present match and (b) incorporates the corrected reaction force adjustment quantity along the direction opposite from curving direction without incorporating the reaction force adjustment quantity along the steering direction matching the curving when the curving direction and the direction along which the risk potential is present do not match.

Claim 9 (original): A driving assist system for a vehicle according to claim 6, wherein:

the reaction force correction device; (a) changes an inclination of the reaction force characteristics by incorporating the reaction force adjustment quantity along both a steering direction matching the curving direction and a steering direction opposite from the curving direction when the curving direction and the direction along which the risk potential is present match and (b) changes the inclination of the reaction force characteristics by incorporating the corrected reaction force adjustment quantity along the steering direction opposite from the curving direction without altering the inclination of the reaction force characteristics along the steering direction matching the curving direction when the curving direction and the direction along which the risk potential is present do not match.

Claim 10 (original): A driving assist system for a vehicle according to claim 7, wherein:

the traveling condition recognition device detects at least a steering angle of the steering device; and

the reaction force correction device corrects the reaction force adjustment quantity based upon the risk potential and the steering angle.

Claim 11 (Currently amended): A driving assist system for a vehicle according to claim 8, wherein:

the traveling condition recognition device detects at least a steering angle of the steering device; and

the reaction force correction device corrects the reaction force adjustment quantity based upon the risk potential and the steering angle.

Claim 12 (original): A driving assist system for a vehicle, according to claim 9, wherein:

the traveling condition recognition device detects at least a steering angle of the steering device; and

the reaction force correction device corrects the reaction force adjustment quantity based upon the risk potential and the steering angle.

Claim 13 (original): A driving assist system for a vehicle according to claim 1, wherein:

the external influence detection device detects a driver's perception of a reaction force generated at the vehicle operating device as the external influence.

Claim 14 (original): A driving assist system for a vehicle according to claim 13, wherein:

the vehicle operating device is an accelerator pedal; and

the external influence detection device detects a state of depression of the accelerator pedal to judge the driver's perception, wherein the external influence detection device judges the driver's perception to be acute if an extent to which the accelerator pedal is depressed is being increased and judges the driver's perception to be dull if the extent of depression is being decreased.

Claim 15 (original): A driving assist system for a vehicle according to claim 14, wherein:

the external influence detection device estimates the state of depression based upon a running resistance of the vehicle.

Claim 16 (original): A driving assist system for a vehicle, comprising:

a traveling condition recognition means for detecting a state of the vehicle and a traveling environment of the vehicle;

a risk potential calculation means for calculating a risk potential present around the vehicle based upon detection results obtained by the traveling condition recognition means;

a reaction force adjustment means for adjusting reaction force characteristics of a vehicle operating device based upon the risk potential calculated by the risk potential calculation means;

an external influence detection means for detecting an external influence which will affect an operation of the vehicle operating device by a driver; and.

a reaction force correction means for correcting the reaction force characteristics

of the vehicle operating device adjusted by the reaction force adjustment means, based upon detection results obtained by the external influence detection means.

Claim 17 (original): A vehicle driving assist method, comprising:

detecting a state of a vehicle and a traveling environment of the vehicle;

calculating a risk potential present around the vehicle based upon the state of the vehicle and the traveling environment of the vehicle;

adjusting reaction force characteristics of a vehicle operating device based upon the risk potential;

detecting an external influence which will affect an operation of the vehicle operating device by a driver; and

correcting the reaction force characteristics of the vehicle operating device adjusted according to the risk potential, based upon the external influence.

Claim 18 (original): A vehicle, comprising:

a traveling condition recognition device that detects a state of the vehicle and a traveling environment of the vehicle;

a risk potential calculation device that calculates a risk potential present around the vehicle based upon detection results obtained by the traveling condition recognition device;

a reaction force adjustment device that adjusts reaction force characteristics of a vehicle operating device based upon the risk potential calculated by the risk potential calculation device;

an external influence detection device that detects an external influence which

will affect an operation of the vehicle operating device by a driver; and

a reaction force correction device that corrects the reaction force characteristics of the vehicle operating device adjusted by the reaction force adjustment device, based upon detection results obtained by the external influence detection device.

Claim 19 (Previously amended): The system of claim 1, wherein the reaction force correction device corrects the reaction force characteristics differently based on different levels of a running resistance estimating a state of a pedal operation by the driver of the vehicle.

Claim 20 (Previously amended): The vehicle of claim 18, wherein the reaction force correction device corrects the reaction force characteristics differently based on different levels of a running resistance estimating a state of a pedal operation by the driver of the vehicle.

REMARKS

This Supplemental Amendment is submitted to correct an inadvertent deletion of the text in Claim 11 in a response filed on October 11, 2005. The Amendment simply reverts Claim 11 back to its original form. No new matter is added. Claims 1-20 are now active for examination.

CONCLUSION

Applicant believes that this application is in condition for allowance, and request that the Examiner give the application favorable reconsideration and permit it to issue as a patent. If the Examiner believes that the application can be put in even better condition for allowance, the Examiner is invited to contact Applicant's representatives listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to **Deposit Account 500417** and please credit any excess fees to such deposit account.

Respectfully submitted,

McDERMOTT WILL & EMERY LLP

Wei-Chen Chen

Wei-Chen Nicholas Chen
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Kathleen Farrell

Kathleen Farrell

AMENDMENT

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

The Amendment and Remarks are submitted in response to the Office Action dated July 11, 2005. Please amend the above-identified application as follows.

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks begin on page 10 of this paper.

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